

**Notice of Allowability**

Application No.

09/882,502

Examiner

Michael B. Holmes

Applicant(s)

CHEN ET AL.

Art Unit

2121

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to November 12, 2004.
2. ☒ The allowed claim(s) is/are 1 and 3-27.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☒ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☒ to Paper No./Mail Date #7/June 6, 2004.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_



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**UNITED STATES PATENT AND TRADEMARK OFFICE**

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P.O. Box 1450, Alexandria, Virginia 22313-1450 – [www.USPTO.GOV](http://www.USPTO.GOV)

**Examiner's Detailed Office Action**

1. Claims 1, 3-27 are allowed.
2. Claim 2 has been cancelled.

**REASONS FOR ALLOWANCE**

3. The following is an Examiner's statement for reasons for allowance:
4. The closest prior art **Protein Structure Prediction Using Hybrid AI Methods**, *X. Guan, R.J. Mural, E.C. Uberbacher "Guan et al."* (Engineering Physics and Mathematics Division and Biology Division, Oak Ridge National Laboratory), 1994, IEEE, do not teach or render obvious applicant's claimed invention. In particular, as pointed out below, the prior art lacks certain features and the combination as specified in the respective claims.
5. With regards to claim 1 *Guan et al.* does not disclose defining a first outcome associated with a first range of medical costs at least as great as a cost threshold, and using a plurality of software-based, computer-executable machine learners to develop from the first, second and third subsets one or more sets of rules usable to predict the first outcome or the second outcome.
6. With regards to claim 17 *Guan et al.* does not disclose evaluating the set of computer-executable rules using a user selectable fitness function, and modifying the machine learning

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methods by using the results of the evaluating act, and presenting a final set of computer-executable rules usable to predict the first outcome or the second outcome.

7. With regards to claim 22 *Guan et al.* does not disclose defining a positive outcome associated with a range of medical costs equal to or greater than a cost threshold, and using a plurality of software-based, computer-executable machine to develop from the first, second and third subsets of the training data one or more sets of rules usable to predict either the positive outcome or the negative outcome.

### Correspondence Information

8. Any inquires concerning this communication or earlier communications from the examiner should be directed to Michael B. Holmes, who may be reached Monday through Friday, between 8:00 a.m. and 5:00 p.m. EST. or via telephone at (571) 272-3686 or facsimile transmission (571) 273-3686 or email [Michael.holmesb@uspto.gov](mailto:Michael.holmesb@uspto.gov).

If you need to send an Official facsimile transmission, please send it to (703) 746-7239.

If attempts to reach the examiner are unsuccessful the Examiner's Supervisor, Anthony Knight, may be reached at (571) 272-3687.

Hand-delivered responses should be delivered to the Receptionist @ (Customer Service Window Randolph Building 401 Dulany Street Alexandria, VA 22313), located on the first floor of the south side of the Randolph Building.

  
**Anthony Knight**  
**Supervisory Patent Examiner**  
**Group 3600**

**Michael B. Holmes**  
Patent Examiner  
Artificial Intelligence  
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